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Class meets: **Tues./Thurs. 8:10-9:25 in Whitehead 408**
Office hours: **Tues./Thurs. 5:20-6:20 or by appointment**
Section: **ETR8** Code: **3112**

Principles of Microeconomics (ECO 20.1)

Brooklyn College – Spring 2007

Microeconomics is the study of the behavior of individual households, firms and industries as well as the supply and demand relationships between producers and consumers.

You might think of a household as a consumer, but households are also producers. For example, take a look at your kitchen: you take raw materials (meat, cheese, vegetables, eggs, salt and pepper) as well as capital (stove and frying pan) and your own labor to produce an omelet, which is demanded by you and members of your family. They may not pay you in money, but you're compensated in other ways.

Cooking an omelet for your family is a very simple example of an economic problem. So what's the point? The point is that economics isn't "all about money." It's about life. It's about human behavior. In fact, economic analysis can be applied to almost any problem imaginable.

For example, there is a branch of economics that studies the production of health and the demand for health. Notice that I wrote "health" and not "health care."

To take another example, economic analysis can also be used to analyze the war on drugs without ever mentioning the word "price." Instead what is important is "opportunity cost" – what we have to give up when we make a choice. In some American cities, police officers are so busy preparing prosecutions that they don't have time to respond to 911 calls. Why? Because the politicians chose to put as many people in jail as possible, they actually had to forgo law and order.

Studying economics will help you understand the nature of trade-offs that you face in everyday life. If you spend more time studying economics, you'll be less likely to make decisions that are as stupid as the ones our politicians have made and more likely to make rational decisions.

Objectives of this Course

This course has two sets of objectives: practical and academic. The practical objectives aim to teach you how to apply mathematics and economics in daily life. The academic objectives (which are listed with the class schedule) aim to teach you basic microeconomics.

The practical objectives consist of:

- enabling you to interpret graphs and equations, both mathematically and intuitively,
- developing your logical thinking skills,
- teaching you how independent variables affect dependent variables and
- helping you apply the concept of opportunity cost, marginalism and efficient markets in everyday life.

Knowledge of algebra is a prerequisite. I will conduct a review of basic algebra, but it's meant to be a review, not an opportunity to learn it for the first time. If you are unable to grasp the concepts I cover during the math review, I will advise you to drop the course – not because I'm cruel, but rather because I don't want you to suffer for four months and fail.

Course Requirements

Your final grade will be determined by a weighted average of a mid-term exam (35 percent), a final exam (45 percent) and the quality of your class participation (20 percent).

The exams will consist of a section of identifications – in which you will write brief definitions and describe the relevance of key concepts, theories, etc. – and a section of essays.

Homework will be assigned and the solutions will be reviewed in class, but I will not collect them and I will not grade them. If you read the *Lecture Notes* and textbook do the homework regularly, you will develop a good understanding of the course material and you will score higher on the exams. If you only read the *Lecture Notes* and do the homework the night before the exam, don't expect to pass.

Finally, in evaluating the quality of your class participation, I will consider:
1. your attitude towards the course material,
2. how well you demonstrate an understanding of the required readings and homework assignments and
3. how often you ask intelligent questions in class.

Saying "I don't understand" and explaining what you don't understand and why you don't understand it is one of the most intelligent things you can do. It demonstrates curiosity and interest in the course material. By contrast, sitting in silence when you don't understand is one of the dumbest things you can do.

Attendance Policy

Come and go as you please, but keep in mind that the lectures are an important part of the course. If you're not here, it's going to be a lot harder to understand the course material. Poor attendance will also adversely affect my evaluation of your class participation.

For example, if you never come to a single class, but somehow manage to ace both exams (which is highly unlikely), your final grade would be a B-plus – that's 80 percent of an A (4.0).

Exam Make-Up Policy

Any student who is either unable to attend class on the day of the exam or simply doesn't feel like coming to class on the day of the exam, doesn't have to come. There's no need to contact me or explain the reason for your absence. Just don't come.

If you miss the mid-term exam, you will be expected to submit a take-home examination within two weeks of the class immediately following the mid-term exam. No exceptions.

If you miss the final exam, you will have to make it up during departmental exams next semester.

In deciding whether or not to come to class on the day of the exam, keep in mind that I see absolutely no reason why the difficulty of the take-home exam or the departmental exam should be comparable to that of the in-class exam. If I were in your shoes, I would come to class on the day of the exam.

Instant Replay Rule

If you do not do well on an exam and would like to improve your grade by doing the make-up exam, I'll look very favorably upon your efforts.

For those of you who would like to improve your grade by haggling with me over points, we'll play by the "Instant Replay Rule." If your complaint has merit, I'll fix your grade. If your complaint does not have merit, it will cost you one whole letter grade.

Email at your Own Risk

Any take-home assignment (such as a make-up exam) should be submitted to me during regular class hours. If you cannot attend class that day, ask a friend to submit it for you.

I will also accept assignments submitted to me by email or left in my box at the Economics Department Office (Whitehead 217).

Keep in mind however that email does not always work perfectly. There is a low (but not insignificant) probability that the email will not be delivered to me. There is also a low (but not insignificant) probability that an assignment left in my box will disappear.

I will not be held accountable for vanishing emails. Nor will I be held accountable for assignments devoured by the mailbox gremlin. You assume ALL of the risk associated with email and/or mailbox submissions. **If I don't receive it, it's your problem, not mine.**

Policy on Cheating

Don't even think about it. I will catch you and I will pursue the harshest penalty that the college allows.

What you should think about is the reputation of your school. If Brooklyn College were to develop a reputation for tolerance of cheating, then potential employers would consider completion of a degree at Brooklyn College to be a trivial accomplishment and your investment of time, money and energy at this school will have been squandered.

Use of notes during an in-class exam is cheating. Don't do it. Copying material from a website on a take-home exam is cheating. Don't do it.

If you think I won't know if you copied material from a website on a take-home exam, you're wrong.

BlackBoard

I won't use BlackBoard much in this course, but there may be times when I would like you to read materials other than the Lecture Notes or the Krugman/Wells textbook. In such an event, I'll post the articles to BlackBoard.

- So go to: http://www.cuny.edu
- At the bottom of the orange column on the left-hand side is a "Log-in" link. Click there.
- On the next page ... If you already have a Portal Login, just enter your username and password.

If you don't have a Portal Login yet, then click the "Register Now!" link and the system will verify your status by using your last name, Social Security Number, date of birth, etc.

- After you have logged in, you'll see a "My Page" window with a whole bunch of bubbles. In the bubble in the upper left ("SSO Applications for Faculty and Staff"), there is a link to "BlackBoard." Click on that link.
- On the next page, you'll be asked to choose your CUNY school. Select the Brooklyn College link and you'll be taken to another screen with a whole bunch of bubbles.
- In the "My Courses" bubble, you'll see a link to the Micro course. Click on that link and you'll finally be in BlackBoard.
- All of the files for the course are in the "Course Documents" page, which you can get to by clicking on the "Course Documents" link in the green column on the left-hand side.

What to Expect

I have an easy-going attitude, but don't expect an easy A. I work hard and I expect the same from you.

I'll give you all the help you need, but don't expect me to spoon-feed you the answers. This is college. Come prepared to ask me questions. Don't waste my time.

I don't see things in black and white. I am incapable of answering a question with a simple "yes" or "no." I look for the complexity in an issue and seek to understand it.

If you get impatient with someone who takes their time to answer a question or goes into too much detail, then I'm probably not the professor for you.

On the other hand, if you want to learn how to analyze an issue and come to a well-reasoned conclusion, then you're in the right place.

Course Readings

- Doviak, Eric. *Lecture Notes on the Principles of Microeconomics*. www.doviak.net
- Krugman, Paul and Robin Wells. *Microceonomics*. 2005. Worth Publishers. ISBN: 0-7167-5229-8
- Pearce, David W. (ed.) *The MIT Dictionary of Modern Economics*. ISBN: 0-262-66078-4

My *Lecture Notes* contain a lot of information, but they are not a substitute for a textbook. You need a textbook for depth. I recommend the Krugman/Wells text because it covers the material in the *Lecture Notes* in far greater depth than my *Lecture Notes* and in much greater depth than other textbooks do.

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Part One – Introduction to Economics

Lecture 1: Introduction and Math Review

read: **appendix to KW chap. 2** and do: **Homeworks #1A and #1B**

Lecture 2: Production, Opportunity Cost and Relative Price

- How does opportunity cost give rise to comparative advantage, the basis of international trade?
- How are gains from trade determined by opportunity cost and relative price?

read: **KW chap. 2** and do: **Homework #2**

Lecture 3: Supply, Demand and Equilibrium

- What role do prices play in moving markets toward an equilibrium in response to a surplus/shortage?
- What events cause the demand curve to shift? What events cause the supply curve to shift?
- How do the equilibrium price and equilibrium quantity supplied/demanded respond to a shift of the supply curve? How do they respond to a shift of the demand curve?
- How do price controls and excise taxes affect the equilibrium quantity supplied/demanded? How do excise taxes affect the price consumers pay and the price producers receive for their product?

read: **KW chaps. 3 and 4** and do: **Homework #3**

Lecture 4: Elasticity

- Why is the concept of elasticity so useful?
- How does elasticity enable us to determine how much of the burden of an excise tax is borne by producers and how much is borne by consumers?

read: **KW chap. 5** and do: **Homework #4**

Part Two – Consumers and Firms

Lecture 5: Household Behavior and Consumer Choice

- How do households allocate their income to maximize their utility?
- How does a change in the price of one good affect the quantity demanded (of that good and of others):
  - through changes in relative price? (substitution effect)
  - through changes in purchasing power? (income effect)

  read: **KW chaps. 10 and 11** and do: **Homework #5**

Lecture 6: The Production Process: The Behavior of Profit-Maximizing Firms

- If the market demand curve for a certain good slopes downward, then why does a competitive firm that produces that good face an infinitely elastic (horizontal) demand curve?
- How does a firm minimize the cost of producing a given level of output?
- How does a change in the wage rate affect a cost-minimizing firm's employment of capital and labor?

  read: **KW chap. 7** skim: **KW chap. 12** and do: **Homeworks #1C and #6**

Lecture 7: Short-Run Costs and Output Decisions

- How do firms' short-run costs differ from their long-run costs?
- What marginal condition determines a profit-maximizing firm's optimal level of output?

  read: **KW chap. 8** skim: **KW chap. 14** and do: **Homework #7**

Lecture 8: Costs and Output Decisions in the Long Run

- What are increasing, constant and decreasing returns to scale and how do they affect optimal firm size and the number of firms in an industry in the long run?

  read: **KW chap. 9** and do: **Homework #8**

Final Exam dates and times (pick one):

Sat. 19 May 9:00 to 11:00 am in Whitehead 206

Tues. 22 May 6:00 to 8:00 pm in Whitehead 408

Thurs. 24 May 8:30 to 10:30 pm in Whitehead 408

Homework #1A

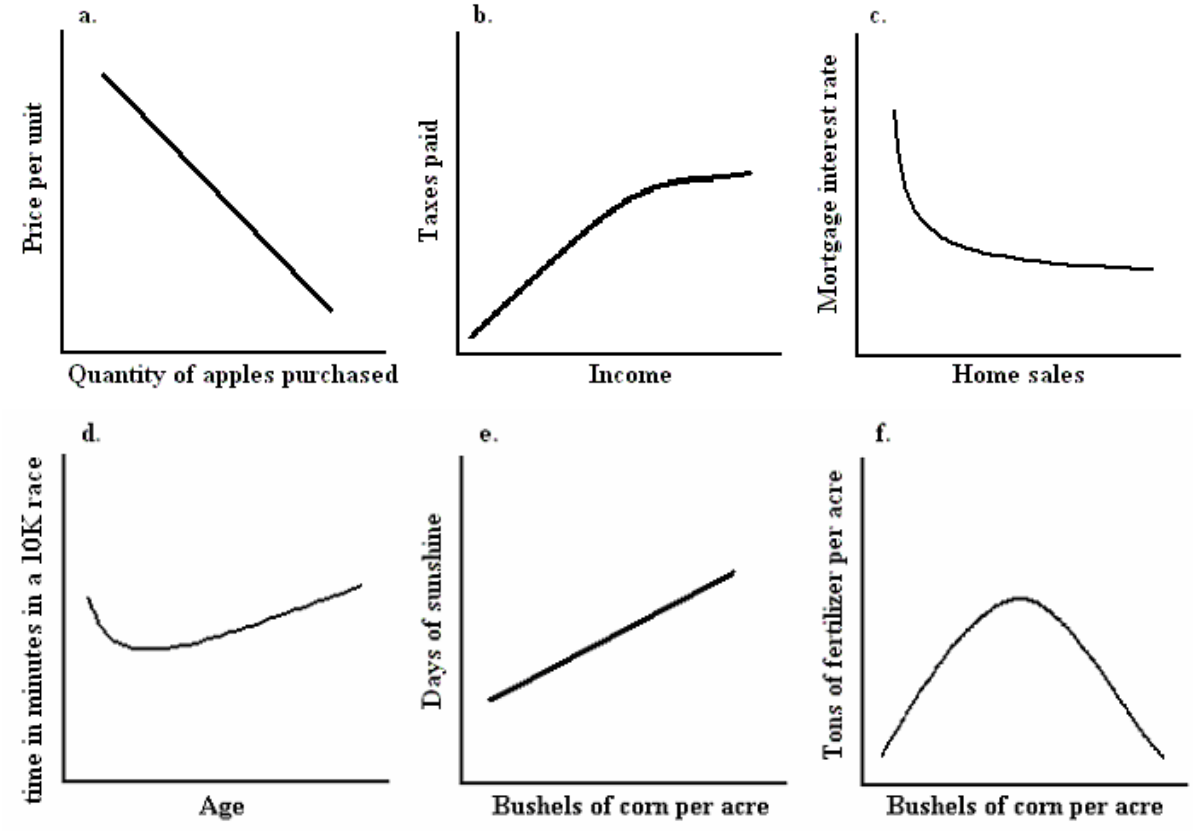
problems #1–3, from Ch. 1, p. 23
of Case/Fair *Principles*...(6th ed.)

1. Graph each of the following sets of numbers. Draw a line through the points and calculate the slope of each line.

1		2		3		4		5		6	
X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	5	1	25	0	0	0	40	0	0	0.1	100
2	10	2	20	10	10	10	30	10	10	0.2	75
3	15	3	15	20	20	20	20	20	20	0.3	50
4	20	4	10	30	30	30	10	30	10	0.4	25
5	25	5	5	40	40	40	0	40	0	0.5	0

2. For each of the graphs in Figure 1 below, say whether the curve has a positive or negative slope. Give an intuitive explanation for the slope of each curve.

Figure 1.



3. For each of the following equations, graph the line and calculate its slope.

a. P = 10 – 2q (Put q on the X-axis)
b. P = 100 – 4q (Put q on the X-axis)
c. P = 50 + 6q (Put q on the X-axis)
d. I = 10,000 – 500r (Put I on the X-axis)

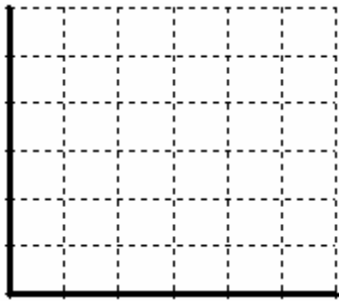
Homework #1B
More Math Review Problems

1. Graph these equations (placing Y on the vertical axis and X on the horizontal axis):

- Y = 2X + 2
- Y = 4X + 2

Comparing the two equations, which is different: the slope or the Y-intercept? How is it different? Are the lines parallel or do they intersect?

X	Y(1st)	Y(2nd)

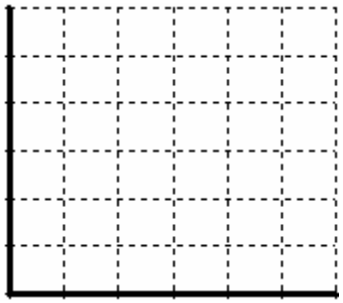


2. Graph these equations (placing Y on the vertical axis and X on the horizontal axis):

- Y = 2 + 2X
- Y = 2 – 2X

Comparing the two equations, which is different: the slope or the Y-intercept? How is it different? Are the lines parallel or do they intersect?

X	Y(1st)	Y(2nd)

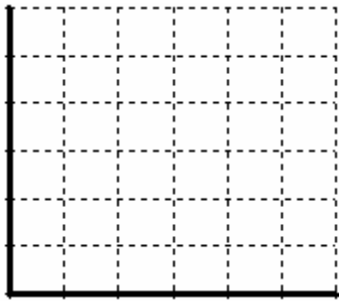


3. Graph these equations (placing Q on the vertical axis and P on the horizontal axis):

- Q = 4 + 2P
- Q = 2 + 2P

Comparing the two equations, which is different: the slope or the Q-intercept? How is it different? Are the lines parallel or do they intersect?

P	Q(1st)	Q(2nd)

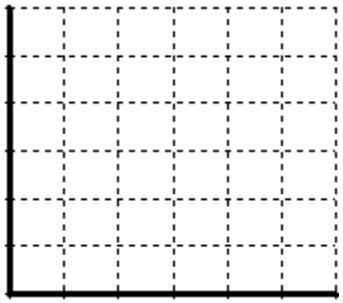


4. Graph these equations (placing Q on the vertical axis and P on the horizontal axis):

- Q = 4 – 2P
- Q = 2 + 2P

These two equations have different slopes and different Q-intercepts. Do the lines intersect? If so, can you find the value of P and Q at which they intersect?

P	Q(1st)	Q(2nd)



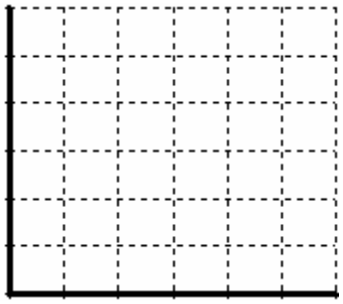
If demand curves slope down and supply curves slope up, then which of these two equations resembles a demand curve? Which resembles a supply curve?

5. ***Solve these two equations for P.*** Then graph the new equations by placing P on the vertical axis and Q on the horizontal axis:

- Q = 4 – 2P
- Q = 2 + 2P

Do the lines intersect? If so, can you find the value of P and Q at which they intersect?

Q	P(1st)	P(2nd)



6. The Law of Demand says that consumers purchase more of a good when its price is lower and they purchase less of a good when its price is higher. Can you give that statement a mathematical interpretation? (***Hint:*** Does price depend on quantity purchased? or does quantity purchased depend on price?)

Is price an independent variable or a dependent variable? Is quantity purchased an independent variable or a dependent variable? What is the difference between a dependent variable and an independent variable?

On which axis (the vertical or horizontal) do mathematicians usually place the independent variable? On which axis do mathematicians usually place the dependent variable?

When economists draw supply and demand diagrams, they usually place price on the vertical axis and quantity purchased on the horizontal axis. Why is that "wrong"?

7. (A question about percentages) 0.750 = _____%

8. (A question about fractions) $\frac{2}{3}$ = _____%